Motion control
Lexium 23 Plus
BCH servo motors

BCH servo motor range

Presentation

BCH servo motors are synchronous motors.

They are equipped as standard with a high resolution (20-bit) incremental encoder. They are therefore ideal for high performance applications such as material working, machine tools, etc.

The servo motors are available in six flange sizes: 40 mm, 60 mm, 80 mm, 100 mm, 130 mm and 180 mm.

They are available in a version with holding brake (see opposite page).

With the four types of motor inertia available, ranging from ultra low to high inertia, the servo motors can be used in a very wide variety of installations:

- Ultra low inertia:

power between 0.1 kW and 0.4 kW, suitable for electronic equipment and small printing machinery.

- Low inertia:

power between 0.4 kW and 2 kW, suitable for textile and packaging applications.

- Medium inertia:

power between 0.3 kW and 3 kW, suitable for material working and machine tool applications.

- High inertia:

power between 2 kW and 7.5 kW, suitable for metal working and printing applications.

Examples of applications according to motor inertia type:

Type of machine	Inertia			
	Ultra low	Low	Medium	High
Conveyors	■		■	■
Packaging machines	■	■	■	
Printers	■		■	■
Loaders/ unloaders	■			■
X - Y tables	■			
Presses	■			■
PCB drilling machines		■		
Electronic card testers		■		
Labelling machines		■		
Knitting and embroidery machines			■	■
Special machines			■	■
Winders/ unwinders			■	

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References

Example:	B	C	H	0	4	0	1	O	0	2	A	1	C
Servo motor **BCH** = three-phase servo motor	**B**	**C**	**H**	0	4	0	1	O	0	2	A	1	C
Flange size **040** = 40 mm **060** = 60 mm **080** = 80 mm **100** = 100 mm **130** = 130 mm **180** = 180 mm	B	C	H	**0**	**4**	**0**	1	O	0	2	A	1	C
Number of motor stages **1** = 1 stage (all flange sizes) **2** = 2 stages (with 60, 80, 100, 130 and 180 mm flanges) **3** = 3 stages (with 130 and 180 mm flanges) **4** = 4 stages (with 130 and 180 mm flanges) **5** = 5 stages (with 180 mm flange)	B	C	H	0	4	0	**1**	O	0	2	A	1	C
Speed type **M** = slow (1000/1500 rpm), (with 130 and 180 mm flanges) **N** = medium (2500 rpm), (with 130 and 180 mm flanges) **O** = fast (3000 rpm), (with 40, 60, 80 and 100 mm flanges)	B	C	H	0	4	0	1	**O**	0	2	A	1	C
Shaft end **0** = smooth, IP 40 degree of protection **1** = keyed, IP 40 degree of protection **2** = smooth, IP 65 degree of protection **3** = keyed, IP 65 degree of protection	B	C	H	0	4	0	1	O	**0**	2	A	1	C
Integrated encoder **2** = 20-bit high resolution incremental encoder	B	C	H	0	4	0	1	O	0	**2**	A	1	C
Holding brake **A** = without brake **F** = with brake	B	C	H	0	4	0	1	O	0	2	**A**	1	C
Connection **1** = flying leads (for BCH040…080 servo motors) or round connector (for BCH100…180 servo motors)	B	C	H	0	4	0	1	O	0	2	A	**1**	C
Type of mounting **C** = mechanical	B	C	H	0	4	0	1	O	0	2	A	1	**C**

Characteristics

Servo motors	Without holding brake		With holding brake	
	W x H x D *(1)*	Weight	W x H x D *(1)*	Weight
	mm	kg	mm	kg
BCH0401	40 x 40 x 100.6	0.500	40 x 40 x 136.6	0.800
BCH0601	60 x 60 x 105.5	1.200	60 x 60 x 141.6	1.500
BCH0602	60 x 60 x 130.7	1.600	60 x 60 x 166.8	2.000
BCH0801	80 x 80 x 112.3	2.100	80 x 80 x 152.8	2.900
BCH0802	80 x 80 x 138.3	3.000	80 x 80 x 178	3.800
BCH1001	100 x 100 x 153.5	4.300	100 x 100 x 192.5	4.700
BCH1002	100 x 100 x 199	6.200	100 x 100 x 226	7.200
BCH1301	130 x 130 x 147.5	6.800	130 x 130 x 183.5	8.200
BCH1302	130 x 130 x 147.5	7.000	130 x 130 x 183.5	8.400
BCH1303M	130 x 130 x 163.5	7.500	130 x 130 x 198	8.900
BCH1303N	130 x 130 x 167.5	7.500	130 x 130 x 202	8.900
BCH1304	130 x 130 x 187.5	7.800	130 x 130 x 216	9.200
BCH1801	180 x 180 x 169	13.500	180 x 180 x 203.1	17.500
BCH1802	180 x 180 x 202.1	18.500	180 x 180 x 235.3	22.500
BCH1803N	180 x 180 x 202.1	18.500	180 x 180 x 235.3	22.500
BCH1803M	180 x 180 x 235.3	23.500	180 x 180 x 279.3	29.000
BCH1804M	180 x 180 x 279.7	30.500	180 x 180 x 311.7	36.000
BCH1805M	180 x 180 x 342	37.000	180 x 180 x 376.1	53.000

(1) D: dimensions of the casing (excluding shaft end)

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Connection accessories

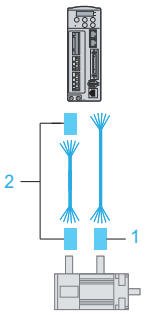
Connection accessories

Designation	Description	Reference	Weight kg
Set of 3 terminal blocks	1 terminal block for power supply 1 terminal block for motor power supply 1 terminal block for braking resistor For mounting on drive side	**VW3 M4 121**	0.500
Connector for I/O interface	For mounting on drive side	**VW3 M4 112**	0.050
Screw terminal block	For I/O interface For mounting on drive side	**VW3 M4 113**	0.020
RS 232/USB converter	Equipped with: ■ One USB connector ■ One RJ 45 connector	**VW3 M8 131**	0.300

Connection cable

Designation	Description	Cable length	Reference	Weight
		m		kg
Connection cable for VW3 M8 131 converter	Equipped with an RJ 45 connector at each end. To connect the VW3 M8 131 converter to the servo drive.	2	**490 NTW 00002**	–

Connectors for power cable



Description	For servo motor	Item no.	Reference	Weight kg
Connector for motor without holding brake	BCH 0401O●2A1C BCH 0601O●2A1C BCH 0602O●2A1C BCH 0801O●2A1C BCH 0802O●2A1C	1	**VW3 M5 111**	0.030
Connector for motor with holding brake	BCH 06010●2F1C BCH 06020●2F1C BCH 08010●2F1C BCH 08020●2F1C	1	**VW3 M5 112**	0.030
Round connectors for motor with or without holding brake	BCH 1001O●2●1C BCH 1002O●2●1C BCH 1301M●2●1C BCH 1301N●2●1C BCH 1302M●2●1C BCH 1302N●2●1C BCH 1303M●2●1C BCH 1304N●2●1C	1	**VW3 M5 121**	0.180
	BCH 1801N●2●1C BCH 1802M●2●1C BCH 1802N●2●1C BCH 1803M●2●1C BCH 1803N●2●1C	1	**VW3 M5 131**	0.180
	BCH 1804M●2●1C BCH 1805M●2●1C	1	**VW3 M5 141**	0.300
Connector for holding brake	BCH 1804M●2F1C BCH 1805M●2F1C	1	**VW3 M7 151**	0.500

Connectors for encoder cable

Description	For servo motor	Item no.	Reference	Weight kg
Connector for motor with connection via stripped cable	BCH 0401O●2●1C BCH 0601O●2●1C BCH 0602O●2●1C BCH 0801O●2●1C BCH 0802O●2●1C	2	**VW3 M8 121**	0.800
Connector for motor equipped with a round connector	BCH 1001O●2●1C BCH 1002O●2●1C BCH 1301M●2●1C BCH 1301N●2●1C BCH 1302M●2●1C BCH 1302N●2●1C BCH 1303M●2●1C BCH 1303N●2●1C BCH 1304N●2●1C BCH 1801N●2●1C BCH 1802M●2●1C BCH 1802N●2●1C BCH 1803M●2●1C BCH 1803N●2●1C BCH 1804M●2●1C BCH 1805M●2●1C	2	**VW3 M8 122**	0.800

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Connection accessories

Connection components (continued)

Power cordsets

Description	From servo motor	To servo drive	Composition	Length of cable	Reference	Weight
				m		kg
Cordsets equipped with a plastic connector (servo motor end) **and one end with flying leads** (servo drive end). **Without holding brake**	BCH0401O●2A1C	LXM23●U01M3X	4 x 0.82 mm²	3	**VW3 M5 111R30**	0.200
	BCH0601O●2A1C	LXM23●U02M3X		5	**VW3 M5 111R50**	0.350
	BCH0602O●2A1C	LXM23●U04M3X				
	BCH0801O●2A1C	LXM23●U04M3X				
	BCH0802O●2A1C	LXM23●U07M3X				
Cordsets equipped with a plastic connector (servo motor end) **and one end with flying leads** (servo drive end). **With holding brake**	BCH0401O●2F1C	LXM23●U01M3X	6 x 0.82 mm²	3	**VW3 M5 112R30**	0.200
	BCH0601O●2F1C	LXM23●U02M3X		5	**VW3 M5 112R50**	0.350
	BCH0602O●2F1C	LXM23●U04M3X				
	BCH0801O●2F1C	LXM23●U04M3X				
	BCH0802O●2F1C	LXM23●U07M3X				
Cordsets equipped with a round connector (servo motor end) **and one end with flying leads** (servo drive end). **Without holding brake**	BCH1001O●2A1C	LXM23●U10M3X	4 x 1.3 mm²	3	**VW3 M5 121R30**	0.350
	BCH1301M●2A1C	LXM23●U04M3X		5	**VW3 M5 121R50**	0.600
	BCH1301N●2A1C	LXM23●U04M3X				
	BCH1302M●2A1C	LXM23●U07M3X				
	BCH1302N●2A1C	LXM23●U10M3X				
	BCH1303M●2A1C	LXM23●U10M3X				
	BCH1303N●2A1C	LXM23●U15M3X				
	BCH1002O●2A1C	LXM23●U20M3X	4 x 2.1 mm²	3	**VW3 M5 122R30**	0.450
	BCH1304N●2A1C	LXM23●U20M3X		5	**VW3 M5 122R50**	0.750
	BCH1801N●2A1C	LXM23●U20M3X	4 x 3.3 mm²	3	**VW3 M5 123R30**	0.760
	BCH1802N●2A1C	LXM23●U30M3X		5	**VW3 M5 123R50**	1.750
	BCH1802M●2A1C	LXM23●U30M3X				
	BCH1803M●2A1C	LXM23●U45M3X				
	BCH1803N●2A1C	LXM23●U45M3X	4 x 8.4 mm²	3	**VW3 M5 124R30**	1.000
				5	**VW3 M5 124R50**	1.200
Cordsets equipped with a round connector (servo motor end) **and one end with flying leads** (servo drive end). **With holding brake**	BCH1001O●2F1C	LXM23●U10M3X	6 x 1.3 mm²	3	**VW3 M5 131R30**	0.350
	BCH1301M●2F1C	LXM23●U04M3X		5	**VW3 M5 131R50**	0.600
	BCH1301N●2F1C	LXM23●U04M3X				
	BCH1302M●2F1C	LXM23●U07M3X				
	BCH1302N●2F1C	LXM23●U10M3X				
	BCH1303M●2F1C	LXM23●U10M3X				
	BCH1303N●2F1C	LXM23●U15M3X				
	BCH1002O●2F1C	LXM23●U20M3X	6 x 2.1 mm²	3	**VW3 M5 132R30**	0.750
	BCH1304N●2F1C	LXM23●U20M3X		5	**VW3 M5 132R50**	1.250
	BCH1801N●2F1C	LXM23●U20M3X	6 x 3.3 mm²	3	**VW3 M5 133R30**	0.760
	BCH1802M●2F1C	LXM23●U30M3X		5	**VW3 M5 133R50**	1.950
	BCH1802N●2F1C	LXM23●U30M3X				
	BCH1803N●2F1C	LXM23●U45M3X				
	BCH1803M●2F1C	LXM23●U45M3X	6 x 8.4 mm²	3	**VW3 M5 134R30**	–
				5	**VW3 M5 134R50**	–

Encoder cordsets

Cordsets equipped with a plastic connector at each end	BCH0401O●2●1C	LXM23●U01M3X	10 x 0.13 mm²	3	**VW3 M8 121R30**	1.000
	BCH0601O●2●1C	LXM23●U01M3X		5	**VW3 M8 121R50**	1.200
	BCH0602O●2●1C	LXM23●U04M3X				
	BCH0801O●2●1C	LXM23●U04M3X				
	BCH0802O●2●1C	LXM23●U07M3X				
Cordsets equipped with a round connector (servo motor end) **and a plastic connector** (servo drive end)	BCH1001O●2●1C	LXM23●U10M3X	10 x 0.13 mm²	3	**VW3 M8 122R30**	1.000
	BCH1002O●2●1C	LXM23●U20M3X		5	**VW3 M8 122R50**	1.200
	BCH1301M●2●1C	LXM23●U04M3X				
	BCH1301N●2●1C	LXM23●U04M3X				
	BCH1302M●2●1C	LXM23●U07M3X				
	BCH1302N●2●1C	LXM23●U10M3X				
	BCH1303M●2●1C	LXM23●U10M3X				
	BCH1303N●2●1C	LXM23●U15M3X				
	BCH1304N●2●1C	LXM23●U20M3X				
	BCH1801N●2●1C	LXM23●U20M3X				
	BCH1802M●2●1C	LXM23●U30M3X				
	BCH1802N●2●1C	LXM23●U30M3X				
	BCH1803M●2●1C	LXM23●U45M3X				
	BCH1803N●2●1C	LXM23●U45M3X				
	BCH1804M●2●1C	LXM23●U75M3X				
	BCH1805M●2●1C	LXM23●U75M3X				